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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,606	06/03/2005	Masato Yoshioka	4244-0106PUS1	3568

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EXAMINER

FISHER, ABIGAIL L

ART UNIT	PAPER NUMBER
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1616

NOTIFICATION DATE	DELIVERY MODE
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03/31/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/537,606	Applicant(s) YOSHIOKA ET AL.	
	Examiner ABIGAIL FISHER	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/18/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt of Amendments and Remarks filed on December 18 2007 is acknowledged. Claims 1-5 were amended. Claims 6-8 were added. Claims 1-8 are pending.

Information Disclosure Statement

Only the abstracts of items BA-BD of the IDS filed on December 18 2007 have been considered by the examiner.

Claim Objections

The objection of claims 1 and 2 is withdrawn in light of applicant's amendments filed on December 18 2007.

Claim 1 objected to because of the following informalities: The claim as written indicates that X can be $\text{CH}^2\text{CH}(\text{OH})\text{CH}^2\text{OH}$. However, this is not proper nomenclature and the formula should be written as $\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{OH}$. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection of claim 1 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention is withdrawn in light of applicant's amendments filed on December 18 2007.

Claim Rejections - 35 USC § 102

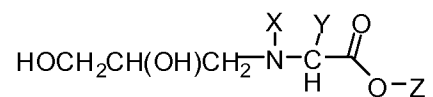
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

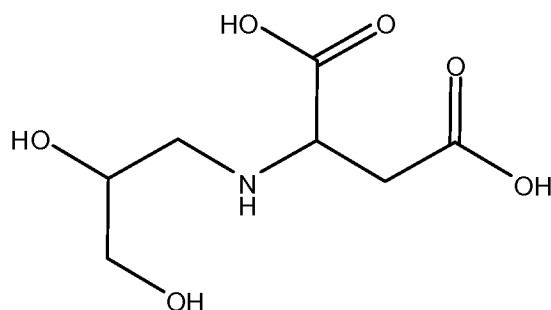
Claims 1 and 4-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Westrenen et al. (Recl. Trav.Chim Pays-Bas, 1990).

The instant application claims a composition comprising an amino acid N-glyceryl derivative that has the following formula (formula I):



where in X is a hydrogen, CH₂CH(OH)CH₂OH group, or an alkyl group having 1 to 4 carbons; Y is a side chain of various α-amino acids; and Z is a hydrogen, alkali metal, ammonium group, organic ammonium group or CH₂CH(OH)CH₂OH.

Westrenen et al. is directed to the synthesis of polyhydroxycarboxylates by a Michael-type addition. Compound 4b is N-(2,3-dihydroxypropyl) aspartate which has the following structure:



It is disclosed that the compound was obtained in the pure form as the diammonium salt (see example, page 477). This structure corresponds to X being hydrogen, Y is the side chain of the amino acid aspartic acid, and Z is either a hydrogen or an ammonium group. Other amino acids included are glycine and serine (page 476, second column, N-alkylation of amino acids with maleate). It is disclosed that these compounds serve as new chelating agents (page 477, conclusions). The compound was dissolved in D₂O, which is a carrier. Consequently, the N-(2,3-dihydroxypropyl) aspartate is in a composition.

Regarding the preambles of claims 1 and 4-5, the recitation of cosmetic, skin care cosmetic, and hair cosmetic have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

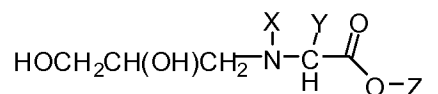
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The rejection of claims 1-5 under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (Japanese Patent Application No. 20000190723) in view of Yokoi et al. (Japanese Patent No. 11322688) is withdrawn in light of applicant's arguments filed on December 18 2007.

Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westrenen et al. in view of Tamura et al. (US Patent No. 5858936).

Applicant Claims

Applicant claims a composition wherein the content of the amino acid N-glyceryl derivative or salt thereof is in an amount of 0.1 to 20% by weight of the total weight of the composition. The N-glyceryl derivative has the following formula (formula I):



Applicant claims that Y is a side chain of various α -amino acids.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Westrenen et al are disclosed above. Specifically, Westrenen et al. disclose the synthesis of N-(2,3-dihydroxypropyl) aspartate and other amino acids such as glycine and serine. The compounds can exist as the diammonium salt. It is disclosed that these compounds serve as new chelating agents.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Westrenen et al. does not disclose utilizing the chelating agents in other formulations. However, this deficiency is cured by Tamura et al.

Tamura et al. discloses detergent compositions. These compositions comprise metal chelating agents. Examples include amino acid chelating agents in either the free acid, or salt form. Types of salts include ammonium salts (column 6, lines 21-35). It is closed that the chelating is present in an amount from 0.5 to 5 times component C (column 7, lines 53-54). Component C is present from 0.2 to 5 wt. % (column 3, lines 18-19). This means that the chelating agent is present in an amount from 0.1 to 25 wt.

%. These detergent compositions are suited as hair or body detergents (column 8, lines 30-34).

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art to combine the teachings of Westrenen et al. and Tamura et al. and utilize the chelating agents of Westrenen et al. in a detergent formulation. One of ordinary skill in the art would have been motivated to formulate the compounds of Westrenen et al. into a detergent formulation because Westrenen et al. discloses that the compounds are new chelating agents. Tamura et al. indicates that chelating agents, including amino acid chelating agents, are utilized in detergent compositions for the hair or body. It would have been obvious to one of ordinary skill in the art to pursue known options within his or her technical grasp, specifically known amino acid chelating agents. One of ordinary skill in the art would have had a reasonable expectation of success because Tamura et al. indicates that amino acid chelating agents are suitable in detergent formulations and Westrenen et al. discloses amino acid chelating agents.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Regarding the claimed ranges of instant claim 2, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. **See MPEP 2144.05 [R-5]**

Regarding claim 6, Westrenen et al. indicates that the amino acids that can be utilized include glycine, serine and aspartic acid. These are three amino acids listed in the Markush group of claim 6.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westrenen et al. in view of Tamura et al. and in further view of Hamada et al. (US Patent No. 5856284).

Applicant Claims

Applicant claims that the Z of formula I from above is an organic ammonium group of the formula $-NR_4^+$, where R is selected from the group consisting of hydrogen, methyl ethyl, hydroxymethyl, hydroxyl ethyl, etc. with the proviso that at least one R group is not a hydrogen atom.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Westrenen et al. and Tamura et al. are set forth above. Specifically, Westrenen et al. teaches compounds of Formula I where Z is an ammonium salt (i.e. that all four R groups of $-NR_4^+$ are hydrogen).

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Westrenen et al. does not teach a composition of formula I where in all four R groups of the ammonium salt are not hydrogen. However, this deficiency is cured by Hamada et al.

Hamada et al. is directed to detergent compositions. Disclosed suitable dermatologically acceptable salts of N-acyl amino acids include ammonium salts such

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as monoethanol ammonium, diethanol ammonium or triethanol ammonium (column 3, lines 53-59).

***Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)***

It would have been obvious to one of ordinary skill in the art to combine the teachings of Westrenen et al., Tamura et al., and Hamada et al. and utilize other dermatologically acceptable salts such as monoethanol ammonium, diethanol ammonium, or triethanol ammonium. One of ordinary skill in the art would have been motivated to utilize these salts because Westrenen et al. discloses utilizing ammonium salts and it would have been obvious to one of ordinary skill in the art to try other known options within their grasp, such as other ammonium salts.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westrenen et al. in view of Matsunaga et al. (US Patent No. 3843567).

Applicant Claims

Applicant claims that the N-glyceryl derivative is a glyceryl derivative of a basic amino acid.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

The teachings of Westrenen et al. are set forth above. Specifically, Westrenen et al. discloses the synthesis of N-(2,3-dihydroxypropyl) aspartate via a Michael-type addition. The amino acids disclosed are aspartic acid, serine, and glycine.

Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)

Westrenen et al. does not specify utilizing a basic amino acid. However, this deficiency is cured by Matsunaga et al.

Matsunaga et al. is directed to a chelating amino acid addition polymer. It is disclosed that the Michael addition reaction is well known (column 2 lines 14-17). The Michael addition requires active hydrogen atoms. Amino acids containing these hydrogen atoms include glycine, aspartic acid, lysine, ornithine, threonine, serine, and alginine (columns 3-4, lines 75 and 1-2). The examiner believes alganine is a typo and Matsunaga means to refer to arginine.

Finding of Prima Facie Obviousness Rational and Motivation
(MPEP §2142-2143)

It would have been obvious to one of ordinary skill in the art to combine the teachings of Westrenen et al. and Matsunaga et al. and utilize other amino acids, such as basic amino acids like lysine and ornithine. One of ordinary skill in the art would have been motivated to utilize other amino acids because Westrenen et al. discloses the synthesis of chelating agents via a Michael-type addition and Matsunaga et al. discloses other amino acids that are suitable to reacting in a Michael-type addition. It would have been obvious to one of ordinary skill in the art to pursue known options within his or her technical grasp, specifically other amino acids that can undergo a

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Michael-type addition. One of ordinary skill in the art would have had a reasonable expectation of success because Westrenen et al. utilizes amino acids such as glycine, serine, and aspartic acid in a Michael-type addition and Matsunaga et al. indicates that besides the afore mentioned amino acids that other amino acids can also undergo this type of addition.

Absent any evidence to the contrary, and based upon the teachings of the prior art, there would have been a reasonable expectation of success in practicing the instantly claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABIGAIL FISHER whose telephone number is (571)270-3502. The examiner can normally be reached on M-Th 9am-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abigail Fisher
Examiner
Art Unit 1616

AF

/Sharmila Gollamudi Landau/

Primary Examiner, Art Unit 1611